

# **EXHIBIT 12**

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*Re: Unauthorized Use of HNI 311-980 – Ligtel Communications, Inc.*

Dear Mr. Goode:

I and my law firm serve as FCC regulatory counsel for Ligtel Communications, Inc. (Ligtel) a 700 MHz band and AWS-1 licensee that uses its licensed spectrum to provide broadband fixed wireless LTE services in northeastern Indiana. I am writing to request formal action from ATIS and/or the IMSI Oversight Council (IOC) to resolve the ongoing unauthorized use of Ligtel's HNI code (311-980) by a cloud-based LTE core solution provider, Baicells Technologies (Baicells). The unauthorized use of Ligtel's HNI by Baicells, as well as by an untold number of Baicells' wireless service provider customers and thousands of its customers' end users, violates ITU regulations that prohibit transmissions with false or misleading identification and frustrates Ligtel's ability to maintain up-to-date and accurate assignment records as required under IMSI guidelines. As a result, and for reasons discussed below, Ligtel respectfully requests that the IOC direct Baicells to immediately cease and desist from using HNI 311-980 or any substantially similar network identification code (such as PLMN 31198) within any portion of its operations.

Ligtel first learned that its HNI code was being misused in late June when it received a report of harmful interference and request for coordination relating to 3.65 GHz network in the State of Nebraska. Technicians observed that the interfering 3.65 GHz network was broadcasting a Public Land Mobile Network (PLMN) code of 31198, leading them to contact Ligtel for a resolution. Ligtel has no operations in Nebraska, but after working with the complainant to help identify the correct network operator, further research revealed that a Texas-based technology

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company known as Baicells Technologies had been instructing customers of its Cloud Core EPC service (such as the Nebraska WISP) to set up their LTE networks using a PLMN code of 31198. At least two active web pages on the Baicells public web site instruct the company's customers to configure their LTE wireless networks using a PLMN of 31198 and assert that this code "identifies Baicells Cloud EPC."<sup>1</sup>

It is unclear how long Baicells has been using Ligtel's HNI code for its service, or how many customers of Baicells have been directed to use the PLMN of 31198 (a 5-digit variation of Ligtel's HNI missing a zero at the end) in the configuration of their networks, or ultimately how many end user devices are currently operating with SIM cards that identify them as Ligtel subscribers (*i.e.*, broadcasting an IMSI that begins with "311980"). It is also unclear to Ligtel whether any unauthorized use of its HNI code is being conducted outside of the United States. Ligtel's senior management and its counsel held a meeting with Baicells management in Ligonier, Indiana, on July 29<sup>th</sup> in efforts to learn answers to these questions and in hopes of reaching a voluntary agreement that would resolve the situation without the need for invoking the authority of ATIS or the IMSI Oversight Council (IOC). However, Baicells was less than candid about their company's misuse of Ligtel's HNI and was unwilling to acknowledge the potential harm to IMSI administration (or to third parties like Ligtel) from instructing its customers to use a confusingly similar five-digit PLMN that was adopted without permission of the IMSI Administrator.

Ligtel believes a directive from the IOC for Baicells to immediately cease and desist from its unauthorized use of the HNI 311-890 or any substantially similar network identification code (such as PLMN 31198) is an appropriate remedy in this instance. Among other things, the IMSI Administrator's responsibilities include dealing with situations involving "alleged HNI non-use or misuse." Also, the IOC is directed to "accept and resolve IMSI-related issues referred to it by an affected telecommunications entity" and to "review and resolve all referrals of alleged HNI non-use or alleged misuse, *i.e.*, nonconformance with the IMSI Assignment and Management Guidelines and Procedures." As assignee of HNI 311-890, Ligtel is mindful of its obligations to assign and efficiently manage the MSINs associated with assigned HNI, as well as to maintain up-to-date and accurate assignment records that match MSINs to mobile terminals/users.<sup>2</sup> To this end, Ligtel has no idea what end users have been assigned Mobile Subscriber ID Numbers (MSINs) under its HNI, let alone what other carriers are using it for their operations in conjunction with Baicells. Ligtel therefore believes that Baicells unauthorized use of Ligtel's

<sup>1</sup> As an example, a November 2016 blog post on the Baicells web site instructs customers/clients of the Baicells Cloud Core solution to use the PLMN of 31198: <https://community.na.baicells.com/t/baicells-cloud-core-equipment/110>. Another instruction on the sidebar of a "Getting Started" page (at <https://na.baicells.com/getting-started>) says: "Operators using the Baicells Cloud Core EPC have two settings in each eNodeB that are mandatory for authentication, the MME = 10.3.0.4 and the PLMN = 31198."

<sup>2</sup> See IMSI Assignment Guidelines and Procedures, Section 7.3.1.

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HNI (which is ongoing) prevents Ligtel from being able to fulfill its recordkeeping obligations under IMSI guidelines.

Moreover, transmitting false identifying information is contrary to foundational principles of the ITU. ITU regulations require stations to identify themselves and establish that “all transmissions with false or misleading identification are prohibited.”<sup>3</sup> In this instance, Baicells is instructing its customers to set up their LTE networks using a PLMN code of 31198. As a result, these networks are unknowingly “spoofing” Ligtel’s HNI of 311-980 because the extra “0” is a placeholder that is automatically added to complete the 15-digit IMSI. We’ve already seen what harm can arise from erroneous information being broadcast by another carrier – resolution of a harmful interference situation was delayed because another carrier’s network was erroneously identified as a Ligtel operation. Fortunately, that was straightened out, but not without delay and inconvenience to the parties involved and unnecessary expense to Ligtel.

Transmitting false identifying information may also have negative public safety repercussions. With the proliferation of new and private LTE networks, harmful RF interference may foreseeably be caused to public safety or other critical radio operations. Transmission of an erroneous HNI could frustrate or delay efforts to resolve such interference. It is also conceivable that Ligtel could receive a court order for lawful surveillance of an end user whose device had an IMSI that misidentified them as a Ligtel customer. In this case, Ligtel would not be able to isolate the communications of the criminal suspect, terrorist or spy identified in the order, or to deliver the communications to the named law enforcement agency. This could frustrate the efforts by law enforcement to identify a criminal suspect or to receive timely surveillance. While a fine against Ligtel might be unlikely under these circumstances, under CALEA, carriers can be fined up to \$10,000 per day for non-compliance.

In closing, Ligtel has never been a customer of Baicells and it has never had any business relationship with that company. It has never given Baicells permission to use HNI 311-980 for any purpose. The only plausible explanation that Ligtel has for this misappropriation of its assigned HNI stems from the fact that the founders and several senior executives of Baicells previously worked for Huawei Technologies and in their previous roles were involved in the deployment of Ligtel’s LTE core (which Ligtel understands was Huawei’s first commercial LTE network deployment in the United States). Ligtel is concerned that the current HNI misuse situation, even if inadvertent or due to a misunderstanding, raises network integrity and security issues for Ligtel since these individuals also had access to Ligtel’s network encryption codes. As a result, prompt resolution of this situation is an utmost priority to Ligtel and any help you can provide would be greatly appreciated.

<sup>3</sup>

See ITU Administrative Rules, Article 19, Section 1 (General Provisions)

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Very best regards,



Cary Mitchell  
Counsel for Ligtel Communications, Inc.

cc: Randy Mead  
Steve Barclay  
Caitlin O'Connor